of the divided polygons, wherein the polygons intersecting the boundary line are

determined as polygons having different polarities of the acquired inner product values.

11.   The imaging processing apparatus according to claim 4, wherein the control means

acquires inner product values of the direction of a light source and normal lines of the

divided polygon, wherein the polygons intersecting the boundary line are determined as

polygons having different polarities of the acquired inner product values.

12.   The record medium according to claim 7, wherein the control provided by the

program stored in the record medium further comprises the step of acquiring inner product

values of the direction of a light source and normal lines of the divided polygons, and

wherein the polygons intersecting the boundary line are determined as polygons having

different polarities of the acquired inner product values.

Please rewrite claims 1, 3, 4, 6, 7, and 9 as follows:

1   A method of forming a polygon image, comprising the steps of:

obtaining a plurality of polygons having normal line data as apex data and constituting a

model;

2

sorting the plurality of polygons into polygons of a first color part and polygons of a second

color part along a boundary line according to the direction of a light source and normal

lines of the plurality of polygons;

dividing polygons intersecting the boundary line along the boundary line;

sorting the divided polygons into polygons of the first color part and polygons of the

second color part along the boundary line according to the direction of a light source and

normal lines of the divided polygons; and

pasting up the first mono-color texture on the polygons belonging to the first color part,

and the second mono-color texture on the polygons belonging to the second color part.

3.   The method of forming a polygon image according to claim 10, wherein

intersectional position of a side line of a polygon intersecting the boundary line is acquired

from a proportional relation with the inner product values of two apexes of the side line of

the polygon intersecting the boundary lines when the inner product value is at the

intersectional position is set "0".

4.   An image processing apparatus comprising:

control means for obtaining a plurality of polygons having normal lines as apex data and

constituting a model, sorting the plurality of polygons into polygons of a first color part

and polygons of a second color part along a boundary line according to the direction of a light source and normal lines of the divided polygons,

dividing polygons intersecting the boundary line along the boundary line, and

sorting the divided polygons into polygons of the first color part and polygons of the second color part along the boundary line according to the direction of a light source and normal lines of the divided polygons; and

a rendering processor for pasting up the first mono-color texture on the polygons belonging to the first color, part and the second mono-color texture on the polygons belonging to the second color part.

6.   The image processing apparatus according to claim 11 wherein

intersectional position of a side line of a polygon intersecting the boundary line is acquired from a proportional relation with the inner product values of two apexes of the side line of the polygon when the inner product at the intersectional position is set "0".

7.   A record medium storing a program which is executed by control means in an image processing apparatus, the program providing a control which comprises the steps of:

obtaining a plurality of polygons having normal lines as apex data and constituting a model;

sorting the plurality of polygons into polygons of a first color part and polygons of a second color part along a boundary line according to the direction of a light source and normal lines of the plurality of polygons;

dividing polygons intersecting the boundary line along the boundary line;

sorting the divided polygons into polygons of the first color part and polygons of the second color part along the boundary line according to the direction of a light source and normal lines of the divided polygons; and

pasting up the first mono-color texture on the polygons belonging to the first color part and the second mono-color texture on the polygons belonging to the second color part.

9.   The record medium having stored therein the program according to claim 12, wherein intersectional position of a side of a polygon intersecting the boundary line is acquired from a proportional relation with the inner product values of two apexes of side line of the polygon when the inner product value at the intersectional position is set "0".